Resources - uses

# SIGNIFICANT HABITATS AND HABITAT COMPLEXES OF THE NEW YORK BIGHT WATERSHED

## Raritan Bay - Sandy Hook Bay Complex COMPLEX #17



I. SITE NAME: Raritan Bay - Sandy Hook Bay Complex

II. SITE LOCATION: Raritan and Sandy Hook Bays form the southeastern portion of the New York - New Jersey Harbor between the southern shoreline of Staten Island, Richmond County, New York, and the northern shoreline of Monmouth County, New Jersey.

TOWNS: Atlantic Highlands, Bound Brook, East Brunswick, Highlands, Keansburg, Keyport, Matawan, New Brunswick, Old Bridge, Perth Amboy, Piscataway, Sayreville, South Amboy, South River, Union Beach, NJ; Staten Island Borough, New York City, NY

COUNTIES: Middlesex, Monmouth, NJ; Richmond, NY

STATES: New Jersey; New York

USGS 7.5 MIN QUADS: Long Branch, NJ (40074-31), Sandy Hook, NJ (40074-41), Keyport, NJ (40074-42), South Amboy, NJ (40074-43), New Brunswick, NJ (40074-44), Narrows, NJ-NY (40074-51), Arthur Kill, NJ-NY (40074-52), Perth Amboy, NJ (40074-53), Plainfield, NJ (40074-54), Bound Brook, NJ (40074-55)

USGS 30 x 60 MIN QUADS: Long Branch, NJ (40073-A1), Trenton, NJ (40074-A1), Newark, NJ (40074-E1).

III. BOUNDARY DESCRIPTION AND JUSTIFICATION: The boundary includes the nearshore portions of Raritan and Sandy Hook Bays, adjacent tidal wetlands, and small remnant freshwater wetlands and forest on the New Jersey and Staten Island shorelines. The boundary also includes the Raritan River and tidal wetlands from the first impassable barrier to fish migration at the Calco Diffusion Wier Dam upriver of the town of Bound Brook, down to the mouth on Raritan Bay, the Shrewsbury and Navesink Rivers, including the Swimming River Reservoir and Shadow Lake down to the confluence with Sandy Hook Bay, and the entire Sandy Hook Peninsula. The outer boundary of the complex in the bay parallels the shoreline from the tip of Sandy Hook west towards the mouth of the Raritan River, then east and north to New Dorp Beach on Staten Island. This outer boundary generally defines an area in the bays that is relatively shallow and strongly influenced by terrestrial inputs, with relatively wide intertidal and shallow subtidal areas along the shoreline. It is thus distinguished from Lower New York Bay, which has deeper water and is more exposed to the marine influence of New York Bight. This estuarine habitat is regionally significant for shellfish and marine, estuarine, and anadromous fish, as well as for its significant migratory and wintering waterfowl concentrations. The wetlands and uplands along the shoreline of the bay are important as fish nursery areas, foraging areas for shorebirds and waterbirds, nesting and foraging areas for terrapins, migratory and wintering stopover habitat for songbirds and raptors, and as sites of rare communities and plants.

**IV. OWNERSHIP/PROTECTION/RECOGNITION:** Sandy Hook in New Jersey and Great Kills on Staten Island are both part of the Gateway National Recreation Area administered by the National Park Service. Portions of the New Jersey shoreline are owned by the U.S. Department of Defense, including the Highlands Army Air Defense Reservation, Earle Ammunition Depot, and the Raritan Arsenal. The New Jersey Department of Environmental Protection manages two natural areas within this complex, Cheesequake Creek and Swimming River. The New York State Department of Environmental Conservation owns part of the Lemon Creek watershed on Staten Island; New York City owns other parts of the watershed. Portions of the uplands in New Jersey are contained within the Monmouth County Park system and parts of the Staten Island shoreline, including Wolfe's Pond, are city-owned and managed by the New York City Department of Environmental Protection and New York City Parks Department. Other portions of the shoreline are a mix of public and private ownership. Although much of the area is unprotected, some wetlands are regulated in New York under the state's Freshwater Wetlands Act of 1975 and Tidal Wetlands Act of 1977, and in New Jersey under the Freshwater Wetland Protection Act and Wetlands Act of 1970; these statutes are in addition to federal regulation under Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act of 1977, and various Executive Orders. The New Jersey State Coastal Area Facilities Review Act (CAFRA) applies to the New Jersey shoreline as far west as Cheesequake Creek. The New York State Department of State, Division of Coastal Resources, has designated Lemon Creek as a Significant Coastal Fish and Wildlife Habitat. Navesink/Shrewsbury, Seidler Beach, and Conaskonk Point have been designated and mapped as undeveloped beach units as part of the Coastal Barrier Resources System pursuant to the federal Coastal Barrier Resources Act, prohibiting federal financial assistance or flood insurance within the unit. Sandy Hook and Cliffwood Beach have been designated and mapped as otherwise protected beach units pursuant to the federal Coastal Barrier Resources Act.

**V. GENERAL AREA DESCRIPTION:** Raritan Bay - Sandy Hook Bay is a large embayment measuring nine by twelve miles (109 square miles) with a surface area of about 28,000 hectares (69,188 acres). The inshore portion of the bays within this habitat complex has a total area of 13,500 hectares (33,500 acres). Raritan and Sandy Hook Bays are divided between the states of New Jersey and New York, and receive direct inflow from the Raritan River, the Shrewsbury and Navesink Rivers, and numerous smaller tributaries along the shorelines of Staten Island and New Jersey. The bays also receive indirect inflow from the Hudson through lower New York Bay and the Passaic and Hackensack Rivers via Newark Bay and the Arthur Kill. Raritan Bay and Sandy Hook Bay drain a watershed of approximately 3,630 square kilometers (1,400 square miles), not including the Hudson, Hackensack, or Passaic Rivers. Dredged channels in Raritan and Sandy Hook Bays range in width from 24 to 427 meters (80 to 1400 feet) and are 3 to 11 meters (10 to 35 feet) in depth. Except for the channels, the bay is relatively shallow, usually less than 6 meters (20 feet) in depth. The tidal range averages 1.7 meters (5.5 feet), entering and leaving the bay in a counter-clockwise gyre. High-salinity ocean water enters at the flood tide from the Ambrose Channel, mixes with the fresh and brackish water, and exits at ebb tide through the Sandy Hook Channel. Compared with other parts of the New York - New Jersey Harbor Estuary, the shorelines of Raritan and Sandy Hook Bays have more remaining natural shoreline and open space. The area is subject to a wide variety of fluctuations in temperature, salinity, and dissolved oxygen, both from natural and anthropogenic activity, especially industrial and sewage effluent and storm-water runoff. The sediments of Raritan Bay and Sandy Hook Bay are predominantly sand, with some areas of gravelly sand overlaid with coarse to fine silt and fine to very fine sand, respectively. Though the majority of the Raritan River watershed drains from the Piedmont physiographic province, the Raritan and Sandy Hook Bays and their shorelines are located on the gravels, sands, and clays of the Coastal Plain physiographic province. The terminal moraine of the most recent glaciation follows the southeastern Staten Island shoreline of Raritan Bay, reaching its southernmost extent in this region at Perth Amboy.

The Shrewsbury and Navesink Rivers are wide tidal rivers surrounded by mostly residential development and separated from the Atlantic Ocean by developed barrier beaches. A few dredged material and salt marsh islands exist at the confluence of the two rivers. The north shore of the Navesink River contains a hilly forested area in Hartshorne Woods County Park. The south shore of Raritan Bay - Sandy Hook Bay, from the confluence of the Shrewsbury and Navesink Rivers and Sandy Hook Bay in Highland, New Jersey, west to the mouth of the Raritan River, includes a narrow strip of bayshore marshes, creeks, beaches, dunes, and remnant forests. Intertidal and shallow subtidal mudflats and sandflats extend out an average of 1/4 mile offshore of these habitats. A total of 1,460 hectares (3,600 acres) of flats was mapped in the National Wetlands Inventory for this portion of shoreline. The salt marshes along this shoreline consist of high and low marsh cordgrass (*Spartina patens* and *S. alterniflora*) with lesser amounts of black grass

(*Juncus gerardii*), marsh elder (*Iva frutescens*), and groundsel bush (*Baccharis halimifolia*) in the high tide zone, and common reed (*Phragmites australis*) is invasive in many places. The upland forests are composed primarily of oaks (*Quercus* spp.), black cherry (*Prunus serotina*), and tree-of-heaven (*Ailianthus altisima*), with an understory of mountain laurel (*Kalmia latifolia*) and arrowwood (*Viburnum* spp.) and lowland forests composed of cottonwood (*Populus heterophylla*) and sweet gum (*Liquidambar styraciflua*). These wetlands, uplands, and nearshore waters form a bayshore complex which is critical for migratory and resident birds and fish. Especially important are the many small tidal creeks entering Sandy Hook and Raritan Bays including, from east to west: Wagner Creek, Many Mind Creek, Ware Creek, Compton Creek, Pews Creek, East Creek, Flat Creek, Chingarora Creek, Matawan Creek, Whale Creek, Marquis Creek, and Cheesequake Creek. Several of these creeks, Matawan Creek, East Creek, and Flat Creek, still have natural creek mouths and a few, such as Cheesequake Creek, have forested headwaters. Also important are the large tracts of bayshore salt marsh such as those at Conaskonk Point and the stretch of shoreline from Flat Creek to Thom's Creek.

The Staten Island shoreline along Raritan Bay from New Dorp Beach to Tottenville includes beach, forest, wetland, and pond areas. Also included in this area are the intertidal and shallow subtidal mudflats extending out from the shoreline an average of about 1/4 mile. A total of 510 hectares (1,260 acres) of flats was mapped in the National Wetlands Inventory. The Great Kills Harbor and Park, part of the Gateway National Recreation Area, include large areas of disturbed common reed marsh with grassland and shmb thicket at Crookes Point dominated by bayberry (*Myrica pennsylvanica*), beach plum (*Prunus maritima*), sumac (*Rhus* spp.), hackberry (*Celtis occidentalis*), and black cherry. The outer shoreline follows a narrow, sandy, groined beach. A large area of flats in Great Kills Harbor extends southwest along the Staten Island Shoreline as far as Wolfe's Pond. The southeastern coast of Staten Island from Wolfe's Pond to Tottenville is the only portion of the Raritan Bay shoreline where the terminal moraine of the last glaciation actually touches the bay. The network of ponds and freshwater wetlands along this section of shoreline is often referred to as the Staten Island Blue Belt. Stream corridor and wetland properties in the blue belt have been purchased by the city of New York and are managed by the New York City Departments of Environmental Protection and Parks to provide stormwater management by maintaining the natural stream/wetland complexes in place of constmcted infrastmctiires; in addition, these natural complexes provide habitat for resident fish, amphibians, and reptiles as well as migratory birds and insects. Wolfe's Pond Park includes an upland forest dominated by oak, hickory (*Carya* sp.), and American beech (*Fagus grandifolia*) as well as a lowland forest dominated by sweetgum, red maple (*Acer rubrum*), black gum (*Nyssa sylvatica*), and pin oak (*Quercus palustris*), with two ponds and some beach and marsh areas. Lemon Creek includes a freshwater stream, tidal freshwater/brackish marsh, and salt marsh, with a waterfront recreation area development at the mouth. Lemon Creek is the only remaining natural tidal creek and wetland ecosystem on the south shore of Staten Island.

Sandy Hook is a club-shaped, 15-kilometer (9-mile) sand spit extending north from the New Jersey mainland into New York Harbor. The peninsula divides the open ocean of the New York Bight Apex to the east from the shallow, protected bays (Sandy Hook Bay and Raritan Bay) to the west. Sandy Hook is extremely narrow at its southem end and gradually widens to an average width of about 900 meters (3,000 feet) at the northem end. The shoreline on the ocean side is reinforced at the southem end with a seawall and groin field, but continues to erode; sandy beach is accreting at the northem end of the spit with a fairly extensive foredune vegetated with American beachgrass (*Ammophila breviligulata*). Extensive areas of backdune habitat occur toward the northem end, with dry sandy soils supporting shrubby vegetation dominated by winged sumac (*Rhus copallina*), bayberry, beach plum, and tree-of-heaven. Two distinct maritime forest areas occur in Sandy Hook, including a mixed-deciduous forest of about 90 hectares (225 acres) with dense vegetation dominated by American holly (*Ilex opaca*), black cherry, hackberry, serviceberry (*Amelanchier canadensis*), greenbrier (*Smilax rotundifolia*), and poison ivy (*Toxidendron radicans*). A second, smaller (25-hectare [60-acre]) forest occurs on the bay side of the peninsula with greater dominance by holly and presence of red cedar (*Juniperus virginiana*). The backside of the spit consists of extensive tidal niud and sandflats and salt marsh dominated by low marsh cordgrass inhabited by a variety of invertebrates including ribbed mussel (*Geukensia demissa*). There are a few small inland marsh areas dominated by common reed. The inland side of the northern end of the spit is the former Fort Hancock site with mowed lawn areas and buildings now used by the National Park Service, U.S. Coast Guard, and National Marine Fisheries Service.

**VI. ECOLOGICAL SIGNIFICANCE/UNIQUENESS OF SITE:** The significance of this complex relates to its geographic location and to the variety and quality of habitat types found here; these include shallow estuarine open waters, sandy beach, maritime forest, salt marsh, mudflats, and riparian forest. These habitats support a large number of regionally rare and important species. The Sandy Hook Peninsula separates the Atlantic Ocean from the southern portion of the New York - New Jersey Harbor Estuary and serves as a dividing line between certain groups of species, with marine, estuarine, and anadromous species concentrated on the outside, shorebirds and waterfowl concentrated on the inside, and migratory landbirds (raptors and passerines) concentrated on the peninsula itself As is tme with Jamaica Bay and Breezy Point on the other side of the Harbor entrance, Sandy Hook and Sandy Hook Bay are at the tuming point of the primarily east-west oriented coastline of New England and Long Island and the north-south oriented coastline of the mid-Atlantic coast. This geographic location and configuration acts to concentrate marine and estuarine species migrating between the New York Bight portion of the North Atlantic and the Hudson-Raritan Estuary. Also, shorebirds, raptors, waterfowl, landbirds, and a variety of migratory insects migrating in both directions are concentrated in the Harbor by these coastlines. These migratory species are further forced by the surrounding urban developed land into the remaining open space and open water of Raritan and Sandy Hook bays and surrounding coastlands. Due to its complex geology and glacial history, Staten Island supports an unusual diversity of habitat types and rare plant species.

There are 205 species of special emphasis regularly using the waters and shorelands of Raritan Bay and Sandy Hook, including the following federally and state-listed species. (Living resources and their habitats are dynamic; therefore, the ecological significance and species information presented here may not be complete or up-to-date. State and federal environmental agencies [see Appendix III for office contacts] should be consulted for additional information.)

Federally listed endangered
peregrine falcon (*Falco peregrinus*)
leatherhack sea turtle (*Dermochelys coriacea*)
Atlantic (=Kemp's) ridley sea turtle (*Lepidochelys kempii*)
sei whale (*Balaenoptera borealis*)
humpback whale (*Megaptera novaeangliae*)
sperm whale (*Physter catodon*)

Federally listed threatened
piping plover (*Charadrius melodus*)
loggerhead sea turtle (*Caretta caretta*)
northeastem beach tiger beetle (*Cincihdela d. dorsalis*)

Federal species of concern[(1)]
northem diamondback terrapin (*Maclemys t. terrapin*)

[1]Species of special concern listed here include former Category 2 candidates.

State-listed endangered - New Jersey
Cooper's hawk (*Accipter cooperii*)
red-shouldered hawk (*Buteo lineatus*)
northem harrier (*Circus cyaneus*)
black skimmer (*Rhynchops niger*)
least tern (*Sterna antillarum*)
meadow horsetail (*Equisetum pratense*)
coast flatsedge (*Cyperus polystachyos* var. *taxensis*)
seabeach knotweed (*Polygonum glaucum*)

State-listed threatened - New Jersey
great hlue heron (*Ardea herodias*)
yellow-crowned night-heron (*Nycticorax violaceus*)

osprey (*Pandion haliaetus*)

State-listed endangered - **New York**
bleeding heart (*Dicentra exima*)
white boneset (*Eupatorium leucolepis*)

State-listed threatened - **New York**
whorled mountain mint (*Pycnanthemum verticillatum* var. *verticillatum*)

State-listed special concern animals - **New York**
common loon (*Gavia immer*)

State-listed rare plants - **New York**
hyssop loosestrife (*Lythrum hyssopifolia*)
soapwort gentian (*Gentiana saponaria*)
blackjack oak (*Quercus marilandica*)

Over 90 species of fish have been reported in various fisheries investigations of the bays. The most abundant are some of the estuarine species that use the lower salinity areas as their permanent residence, in particular, mummichog (*Fundulus heteroclitus*), white perch (*Morone americana*), and hogchoker (*Trinectes macalatus*). The bay complex supports recreational fisheries for weakfish (*Cynoscion regalis*), bluefish (*Pomatomus saltatrix*), winter flounder (*Pleuronectes americanus*), summer flounder (*Paralichthys dentatus*), striped bass (*Morone saxatilis*), sea bass (*Centropristis striata*), tautog (*Tautoga onitis*), scup (*Stenotomus chrysops*), and spot (*Leiostomas xanthurus*). Commercial pound net, fyke net, and staked shad net fisheries exist for American shad (*Alosa sapidissima*); American eel (*Anguilla rostrata*) and American lobster (*Homarus americanus*) are landed in pot fisheries, and blue crab (*Callinectes sapidus*) and horseshoe crab (*Limulus polyphemus*) are taken in a dredge fishery. Although the bays are closed to direct market harvest of shellfish due to pollution, there are commercial quantities of northern quahog (*Mercenaria mercenaria*) and soft clam (*Mya arenaria*), which are harvested for depuration or relay. There are also areas of blue mussel (*Mytilus edulis*) and eastern oyster (*Crassostrea virginica*) beds as well as an Atlantic surf clam (*Spisula solidissima*) bed in the deeper waters north of Sandy Hook. Spawning habitat in the shoal waters for horseshoe crab provides an important food source in the spring for migrating shorebirds. There are several harbor seal haulouts on both sides of the Sandy Hook Peninsula, and both harp and ringed seals are regularly sighted. Loggerhead turtles occur off the northern tip of Sandy Hook, and Atlantic ridley sea turtles feed in Horseshoe Cove.

The migratory and mid-winter concentrations of waterfowl in this complex are especially significant, with 20-year midwinter averages of over 60,000 birds. The combination of geographic location and configuration coupled with productive bay wetlands, flats, and waters in Raritan Bay make it an important migratory staging area for many species of waterfowl on the Atlantic Flyway, with peak migration occurring in late October. November aerial counts in New Jersey waters average nearly 45,000 birds. The number of horned grebes as well as common and red-throated loons during migration is regionally significant. Especially notable are the overwintering scaup concentrations, primarily greater scaup, which have increased in this area recently and comprise an important component of the Atlantic Flyway population. Other significant species populations include Canada goose (*Branta canadensis*) in the Raritan River and the Navesink system, American hlack duck (*Anas rubripes*), canvashack (*Aythya valisneria*), mallard (*Anas platyrhynchos*), and brant (*Branta bernicla*), along with lesser numbers of bufflehead (*Bucephala albeola*), oldsquaw (*Clangula hyemalis*), mergansers, primarily red-breasted merganser (*Mergus serrator*), common goldeneye (*Bucephala clangula*), and American wigeon (*Anas americana*). These waterfowl are not evenly distributed but, rather, tend to concentrate along the southern Raritan Bay and Staten Island shorelines and in the Shrewsbury and Navesink Rivers. Moderate sized flocks of scaup and American black duck and smaller rafts of brant occur along the Staten Island shoreline. The mouth of the Raritan River and the area aromd Perth Amboy and South Arnboy is especially important for canvasback. The south shore of Raritan Bay is important for American black duck and scaup. The ponds and creeks of the Shrewsbury and Navesink system are extremely important in the winter for dabbling ducks, canvasbacks, and scaup, with bufflehead and Atlantic brant throughout the system. Double-crested cormorants (*Phalacrocorax auritus*) also occur in large numbers, as well as notable numbers of great cormorant (*Phalacrocorax carbo*) in the winter. Breeding birds along the bayshore include American black duck, mallard, clapper rail (*Rallus longirostris*), king rail

(*Rallus elegans*), green-backed heron (*Butorides striatus*), marsh wren (*Cistothorus palustris*), and willet (*Catoptrophorus semipalmatus*). The forest remnants support nesting by forest birds, including over 50 pairs of wood thrush (*Hylocichla mustelina*) in the forests adjacent to Cheesequake Creek as well as various vireos, warblers, flycatchers, and other forest interior-nesting birds.

The shorelines of Raritan Bay, both the south shore in Monmouth County, New Jersey, and the Staten Island, New York shoreline, concentrate migratory shorebirds and Neotropical migrant landbirds. Shorebird surveys done in the early 1980s have indicated the importance of the greater Raritan Bay for spring and fall shorebird migration with seasonal totals of over 20,000 birds based on weekly surveys. The peak months are June and August, and the primary concentration areas are Great Kills on Staten Island, the flats inside Sandy Hook, and the south shore between Chingora Creek and Conaskonk Point; three species, sanderling (*Calidris alba*), ruddy turnstone (*Arenaria interpres*), and semipalmated sandpiper (*Calidris pusilla*), make up about 85% of the total of migratory shorebirds using this area.

The embayment from Point Comfort to Conaskonk Point is a nearly uninterrupted salt marsh shoreline with natural creek mouths that is an important feeding area for shorebirds as well as black skimmer and yellow-crowned night-heron that nest just inland at Natco Lake. There are several osprey pairs nesting on poles along this stretch of marsh. Diamondback terrapin feed in the marsh and creek system and may nest in this area. Further to the west at the Raritan River mouth, egrets and ibis are often seen foraging, probably representative birds from the Harbor Herons Complex on the Arthur Kill (see narrative). A fill and marsh area at South Amboy supports a diversity of fauna and flora that, with protection and management, has potential to be an important forested shoreline area.

Notable upland areas along the Staten Island shoreline include the hybrid oak woods area in Tottenville where a number of oak hybrids with willow oak (*Quercus phellos*) and blackjack oak occur: *Quercus* x *bushii*, *Q.* x *heterophylla*, *Q.* x *brittonii* and *Q.* x *rudkinii*. It is suspect that willow oaks in this area are indigenous, but nonetheless the resulting hybrids are of considerable interest to the scientific community. Also occurring here is the state-listed endangered bleeding heart at the northem limits of its range and a small paw-paw (*Asimina triloba*) community apparently naturalized from an introduced specimen. Other rare plant species along the Tottenville shoreline include giant yellow hyssop (*Agastache nepetoides*), hyssop loosestrife, whorled mountain mint, and possible occurrence of white boneset. A small, unusual forest dominated by hackberry exists at Wards Point. This hackberry forest supports a population of the regionally rare tawny emperor butterfly (*Asterocampa clyton*). The Lemon Creek area, located to the northeast of Tottenville, contains tidal, freshwater, and adjacent upland areas that support concentrations of waterfowl, waterbirds, and songbirds throughout the year, including the only known purple martin (*Progne subis*) colony in New York City.

Sandy Hook is the only undeveloped barrier beach area on the northern end of the New Jersey coastline north of Island Beach State Park, located 55 kilometers (34 miles) to the south. There are currently five beach-nesting bird colonies on the ocean beach at Sandy Hook, with an average of 20 pairs of piping plover from 1985 to 1995. There has been a steady increase from eight nesting pairs of plovers in 1985 to 43 pairs in 1995 at Sandy Hook. Productivity of piping plovers at Sandy Hook is also consistently the highest in New Jersey, with an average of nearly 1.5 chicks fledged per nesting pair, compared with the statewide average of about 1.0 chick fledged per nesting pair. Over 600 least terns nested along with the piping plover at the five Sandy Hook sites in 1995, the largest number of least terns in New Jersey that year. Common tem (*Sterna hirundo*) also nest at one site, and black skimmer have recently nested at another beach site. Seabeach knotweed and seabeach sandwort (*Honckenya peploides*) occur at several beach sites at the northern tip of the island, and beach wormwood (*Artemisia campestris* ssp. *caudata*) occurs throughout the area. Historically, the federally listed threatened northeastem beach tiger beetle nested at Sandy Hook; the U.S. Fish and Wildlife Service and National Park Service are experimenting with reintroduction of this species at two locations at the northem tip, and the initial experiments have been successful. The backdune areas on Sandy Hook support spotted turtle (*Clemmys guttata*), box turtle (*Terrapene c. carolina*), eastem mud turtle (*Kinosternon subrubrum*), and several regionally rare plant species such as Virginia pine (*Pinus virginiana*). Cut-leaved evening primrose (*Oenethera laciniata*) occurs in the sandy shoreline of Horseshoe Cove on the inside of the peninsula. Willet breed on the sandy spit at the northern end of Spermaceti Cove and clapper rail nest in the salt marsh. American oystercatcher (*Haematopus palliatus*) nest on Skeleton Hill Island and feed throughout the protected wetlands and shallow waters on the inside of the hook.

Maritime holly forests that occur at Sandy Hook occur at only a few other locations in the region and are a globally

imperiled community due to their rarity. The forests are important as roosting and nesting locations for a variety of birds, and include historical nesting by great blue heron, historical nesting and present roosting by black-crowned night-heron (*Nycticorax nycticorax*), and nesting by several pairs of osprey and several species of passerines. The holly is also a host plant for the regionally rare butterfly Henry's Elfin (*Incisalia henrici*).

Spring hawk counts at Fort Hancock on Sandy Hook average nearly 5,000 birds between March and May dominated by kestrel (*Falco sparverius*) and sharp-shinned hawk (*Accipter striatus*), with lesser numbers of northern harrier (*Circus cyaneus*), red-shouldered hawk (*Buteo lineatus*), merlin (*Falco columbarius*), Cooper's hawk (*Accipter cooperii*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), and osprey.

**VII.** THREATS AND SPECIAL PROBLEMS**:** Much of the upland and wetland shoreline of Raritan Bay and the watersheds of these bays have been developed, impaired, or degraded by industrial, commercial, and residential uses. Historical and present industrial uses in the watershed have resulted in the discharge of toxics including heavy metals, especially copper, hydrocarbons, PCBs, and PAHs. The sediments in western Raritan Bay were found to be relatively toxic, with diminishing toxicity to the east closer to the harbor entrance. Oil and chemical spills in the bays and surrounding areas are still common; major spills in the Arthur Kill occurred in the early 1990s. Nutrients, organic matter, and suspended solids continue to enter the watershed from sewage treatment plants and other point and nonpoint sources. Western Raritan Bay also had some of the lowest bottom water dissolved oxygen concentrations in the New York - New Jersey Harbor in recent years. There are several proposals to construct additional marinas and residential areas in the few remaining areas of undeveloped marsh and coastlands along the Raritan Bay's south shore. The U.S. Army Corps of Engineers is evaluating the hardening of the Staten Island shoreline for flood protection. Hardening of the remaining natural shoreline would result in loss or degradation of the shoreline and nearshore habitats. The multiple local, county, and state jurisdictions around Raritan Bay make regional planning especially challenging, particularly for fish and wildlife conservation.

Direct harvest of shellfish is not permitted in much of the bay due to high fecal bacteria counts; often after storms some bathing beaches are closed because of excessive bacterial contamination. Fish and shellfish that reside in the Hudson-Raritan Estuary are under health advisories due to contamination from a variety of toxics, including PCBs, PAHs, DDT, other pesticides, metals, radioisotopes, dioxins, and furans. In the National Oceanic and Atmospheric Administration's (NOAA) National Status and Trends Program, the Hudson-Raritan Estuary was ranked highest overall among estuaries sampled in contaminant concentration. Floatable garbage and debris continue to impact wildlife and the shoreline of this estuary. During the summer warmwater periods, there are still large fish kills; although these are generally from unknown causes, there is mounting evidence that the cause is low dissolved oxygen (DO). These events could be driven by excessive turbidity and eutrophic microalgal blooms that occur in the nutrient-rich water. The area supports a rather large concentration of recreational watercraft; the impacts of their individual effects (unburned fuel and oil residues, antifouling paints, noise, waves, trash, and marina infrastructure), when taken as a whole, are not yet fully understood.

Extensive use of the beaches at Sandy Hook has resulted in some disturbance of nesting birds and has created increasing public pressure for additional parking lots and open beach areas that would further diminish natural habitats in this area. Southern portions of the beach at Sandy Hook are threatened by erosion. In addition, sea level rise and dredging of channels and borrow pits have resulted in the loss of productive shallow water areas in the bays. Dams at Shadow Lake and the Swimming River Reservoir on the Navesink River and on other tributaries in the area, such as Matawan Creek and Cheesequake Creek, are impediments to anadromous fish runs that historically occurred there.

Accidental releases of oil and other hazardous materials are a major threat in this area. Spills can occur during each mode of transportation and during product transfer. Severity of spill impacts is affected by numerous factors, such as type of oil product, behavior of the product on water, volume of the spill, weather conditions, time of year, and habitats impacted. Biological resources at risk include all stages of benthic organisms, the eggs, larvae, and juvenile stages of fish and shellfish, waterfowl, seabirds, shorebirds, beach strand plants, colonial waterbirds, marine mammals, and sea turtles. Nonpoint sources, less easily recognized, contribute up to half of all the oil-related pollution, and result from municipal and urban wastes, urban runoff, atmospheric deposition of incomplete combustion products from autos and trucks, unrecovered spent motor oils, leaks from offshore operations, and burned and unburned fuels and lubrication

products from boating. This chronic low-level pollution has devastating and widely differing effects on fish, invertebrates, and algae, with the early life stages being most vulnerable.

**VIII. CONSERVATION RECOMMENDATIONS:** The remaining undeveloped shoreline, especially the natural creek mouths along Raritan Bay, are some of the last remnants of this type of habitat in the urban core; they need to be kept in as natural a state as possible and protected in the event of oil or chemical spills. Restoration of forest on vacant sites along the bay shoreline is a priority, due to the scarcity of this habitat type along the bay. Monitoring of sites within this complex, especially the 20-year long-term bird monitoring program being conducted by New Jersey Audubon at a network of sites along the south shore, provides valuable information and should be continued and monitoring plans developed using these data. A regional conservation plan focusing on the protection of the remaining natural communities along the bayshore would help address the multiple concerns and jurisdictions involved in Raritan Bay.

It is not necessarily best, nor possible, for government agencies or conservation organizations always to acquire all the lands needed to protect a rare community type or important habitat. Various approaches and strategies exist for protecting valuable wildlife habitats; each provides different degrees of protection and requires different levels of commitment by regulatory agencies, conservation organizations, and landowners. These techniques include combined public and private financing, land exchanges, conservation easements, cooperative management agreements, mutual covenants, purchase of development rights, comprehensive planning, zoning and land-use regulations, enforcement of existing local, state, and federal regulations, and fee simple acquisition. Techniques can be combined to develop a strategy for land protection that is tailored to a specific site. Partnerships among individual landowners within habitat complexes offer an exciting, practical, and innovative approach to the large, landscape-scale habitats recognized here.

Recent efforts to restore eelgrass in Raritan Bay have failed, but might be possible with additional improvements in water quality. Efforts should be made to maintain and restore eelgrass beds in the Shrewsbury and Navesink system. Maintaining eelgrass beds will depend on reducing inputs of nutrients and suspended solids into this system. The Navesink River Water Quality Improvement Project in Monmouth County being conducted by the New Jersey Department of Environmental Protection and U.S. Department of Agriculture should be continued and expanded to other watersheds along the south shore of Raritan Bay.

The American Littoral Society has conducted surveys of impediments to spawning at creeks feeding into New York Harbor. They have recommended that fish passage be restored through the installation of fish ladders at Shadow Lake and Swimming River Reservoir, part of the Navesink system. Other possible fish passage techniques such as cleanup of tributaries and herring heaves (manual movement of fish) may be feasible on other small tributaries such as Matawan Creek and Cheesequake Creek on the south shore.

On Sandy Hook, the National Park Service should continue to protect both current and potential beach nesting areas and adequate buffers; additionally, it should limit or restrict the recreational use of beaches and development of recreational facilities that would reduce or disturb beach nesting by rare species. Sandy Hook contains some of the largest and most successful beach-nesting bird populations in the region, and the protection of these should be a high priority. Protection efforts such as fencing for beach-nesting birds should be expanded to include rare beach strand plants where appropriate. Once successful reintroduction techniques are developed, the northeastern beach tiger beetle should be reintroduced at several locations on Sandy Hook. The National Park Service should also continue to maintain protection of maritime forest and backdune areas and ensure the perpetuation of natural coastal processes on the barrier spit.

Oil industry use of best management practices, training programs, equipment maintenance, and strict adherence to industry standards and government regulations is essential to preventing oil spills. Government support and oversight is needed to evaluate techniques and materials to decrease the frequency and impacts of spills. Identification and mapping of significant habitats should be included in oil spill contingency plans. Planning efforts and practice drills by the U.S. Coast Guard (USCG) Regional Response Teams and the USCG - Captain of the Port Oil Spill Area Contingency Plans Area Committees must be conducted annually for readiness to contain and remediate spills.

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List of Species of Special Emphasis

Maps

Return to table of contents

# Old Bridge

## 1. Overview of Old Bridge and Its Waterfront


### 1.1 Geographic Overview

Old Bridge Township, located in Middlesex County, is approximately 40.5 square miles in total area, with a land area of approximately 38 square miles. The Raritan Bay creates the eastern border for the Township. The sections of the Township that border the Bay are Morgan and Laurence Harbor. Cheesequake State Park, located in the Township, contains the headwaters for Cheesequake, Margaret and Whale Creeks, which in turn empty into the Bay. To the north and west, Old Bridge is bordered by the Boroughs of Sayreville and South Amboy.

Based upon a land use inventory prepared for the 2000 Land Use Plan Element, Old Bridge is approximately 68% developed. The bulk of its vacant land is situated on large tracts that are generally located within areas that are environmentally sensitive. The salt marsh and estuarine habitat of Old Bridge is dominated by tall salt marsh cordgrass and meadow grass.



**Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper.** *http://www.nynjbaykeeper.org*

Proximity to the Bayshore or river does not greatly affect either the Township's economy or increased use by non-residents of the waterfront facilities.

## 1.2 Demographics

The 2000 Census reports the population of Old Bridge as 22,833. The racial composition is 80.6% White (Non-Hispanic), 6.6% Hispanic, 3.8% Black, 3.0 % Asian Indian, 2.1% Filipino and 1.8% Chinese.

In 2000 the median household income was $73,824 and the median house value was $171,200. Additionally, in 2000 there were 7,354 houses in Old Bridge with 6,419 houses owner-occupied and 868 houses renter occupied.

Industries providing employment in 2000 include educational, health and social services (17.9%), finance, insurance, real estate, and rental and leasing (12.7%), retail trade (12.1%), professional, scientific, management, administrative, and waste management services (11.2%), and manufacturing (10.6%). Of note, in 1980, manufacturing represented 21.1% of the occupations for Old Bridge residents; in 1990, manufacturing was reduced to 10.5%.

## 1.3 Historical Overview and Traditional Waterfront Uses

The settlement of Old Bridge dates back to the late 17th century, mainly in the Cheesequake area. Old Bridge was never a very prosperous agricultural community, due mainly to soil limitations. However, it was part of Middlesex County's clay district, and clay mining was an important activity through the late 19th century, mainly in the Cheesequake and South River areas. Lumber was also an important resource.

Growth was limited in the first part of the 20th century due to the decline of the traditional economic activities. After WWII, residential development started to occur on land formerly occupied by farms. This growth in population has not been accompanied by a concomitant growth of the economic base, and today Old Bridge is a predominately residential community



**Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper.** *http://www.nynjbaykeeper.org*

with a very low employment base. Township property taxes provide the major source of revenue for Old Bridge.

Before the construction of the Garden State Parkway, this area was considered the "New Jersey Shore." In the 1920s through the 1940s, Route 35 was the major road and Old Bridge was considered a destination shore area. Many bungalows and summer homes were constructed during this time period. Now beach goers pass by Middlesex County on their way to shore points further south in Monmouth and Ocean Counties. While Old Bridge does not have the rolling waves and surf found in the ocean, it does have convenient access to the waterfront for locals and is close to the beaches at Sandy Hook.

Another trend has been the conversion of bungalows into year-round residences (actually, this occurred as early as the 1940s and 50s) or the tearing down of bungalows by new owners in order to constmct larger and more modem homes. This is especially prevalent on the bluff in Laurence Harbor.

## 2. Waterfront Use

### 2.1 Summary of Waterfront

The majority of the waterfront in Old Bridge is publicly accessible, with the exception of four or five residential lots that abut the waterfront park.

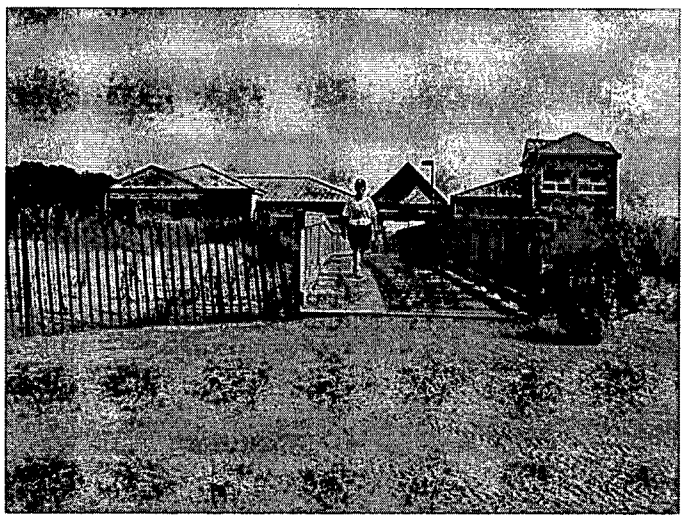
The people use the Old Bridge waterfront in many ways, including for fishing, "unofficial" swimming, sunbathing, jogging, walking, sunset viewing, public events, and other passive and active recreation. The township does not have sanctioned swimming. This is because Old Bridge's waterfront is a tidal basin and depends on tides for water level. Additionally, the substrate is of different types and fluctuates with the tide. The shallowness of the water can be dangerous for boats and other water recreation uses.

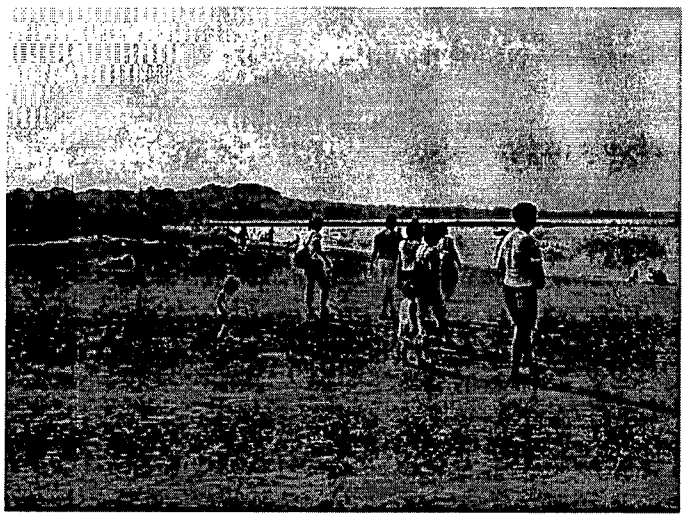


Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper. http://www.nynjbaykeeper.org

Old Bridge Township

The waterfront in this region is a comprised of a few sections, in various stages of development. The section furthest along in development is the "Old Bridge Waterfront Park," which is a 2 mile long, tidal basin on the Raritan Bay. In 2002, the township entered into an agreement with Middlesex County in 2002 to develop this county park. The county is responsible for developing and maintaining this waterfront park.



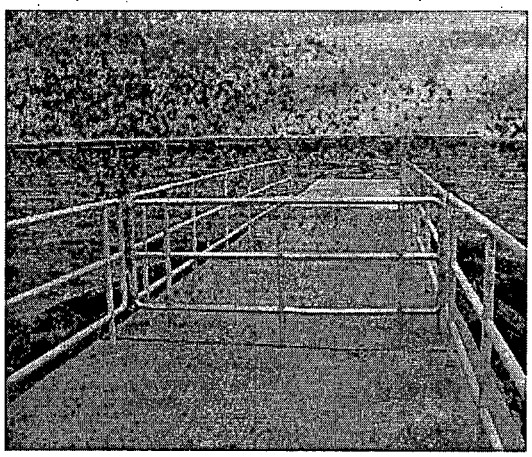


The first phase of the park has been completed. This section has a concession stand, parking (250 spaces), a pavilion with restrooms and changing rooms, a beach, and a police substation that is staffed by Old Bridge police who utilize ATVs, water vehicles, etc. The pavilion and adjacent parking lot are reached via Route 35, exiting just by the Morgan Drawbridge and relying on common sense rather than the vague directions posted on the Township's website and signage on Route 35. There is also a 1.2 mile boardwalk (partly wooden and partly macadam) that links the pavilion and beach area with Laurence Harbor. Recently a bait shop has replaced a beauty shop in this area of the waterfront and a local employee related that many people come here to use the beach, mainly for fishing.

The formal walkway ends at Margaret's Creek, the dividing line between Laurence Harbor and Cliffwood Beach.



**Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper.** *http://www.nynjbaykeeper.org*



At the northem end of the township's waterfront are two jetties built to provide shore protection. The jetties/piers are at 12 foot elevation. Concrete pads have been placed on top of the jetties allowing fishermen access. However, on one vish the end of one jetty was gated and a "No Trespassing" sign was propped up against the base of the jetty. More recently in Laurence Harbor an additional jetty was created for shore protection and also is used for fishing. Fishing permits are sold by the Township to allow fishing after the park's closing hours.

Efforts have been made throughout this park to make it attractive and comfortable. There are numerous benches along the walkway, although not all were well planned – one, while comfortable, only offered the view of the wooden rail of the boardwalk. A few benches were even facing away from the water, looking up a steep hill, littered with trash, that led up to the residential area of town. There are light poles along the walkway, but no garbage can was in site during our site visit.

Because of tidal action and the shallow water levels, there are not many commercial waterfront uses. There is no ferry service to Old Bridge, but a NJ Transit bus line runs through town.

There are a couple of marinas along the inlet but none along the Raritan Bay waterfront. Marine trade stores are located along Route 35.

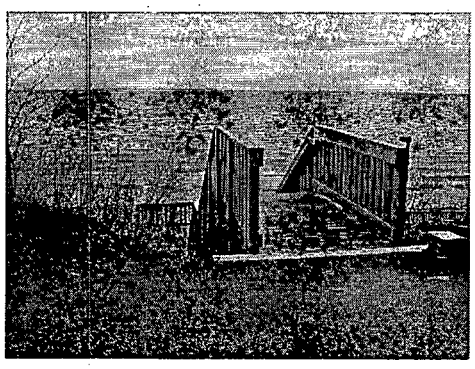


Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbiuy River." Keyport, New Jersey: NY NJ Baykeeper. http://www.nynjbaykeeper.org

## 2.2 Waterfront Access Sites

| | Common Name | Address | GPS | Fishing | Private Marina | Public Marina | Trailered Launch | Hand Launch | Birdwatching | Swimming | Parking | Handicapped Accessible | Picnic Facilities | Food Concessions | Restroom Facilities | Fea |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Publicly recognized sites | Old Bridge Waterfront Park | Route 35 | | X | | | | | X | X | X | X | X | X | X | |
| | Twilight Avenue & Shore Avenue | Old Bridge Waterfront Park | | | | | | | | | X | X | | | | |
| | Unnamed Parking Lot | Old Bridge Waterfront Park | | | | | | | | | X | | | | | |
| | Laurence Harbor | | | X | | | | | | X | X | | | | X | |
| Infonnally used and accessible | Cliffwood Way | Cliffwood Way and Old Bridge Waterfront Park | | X | | | | | | X | X | | | | | |

***Old Bridge Waterfront Park***: The park contains a pavilion with a concession stand, police substation, restrooms and changing area. There is a beach that is rocky in nature. The walkway begins at the pavilion and is handicapped accessible. The parking lot has 250 spaces.



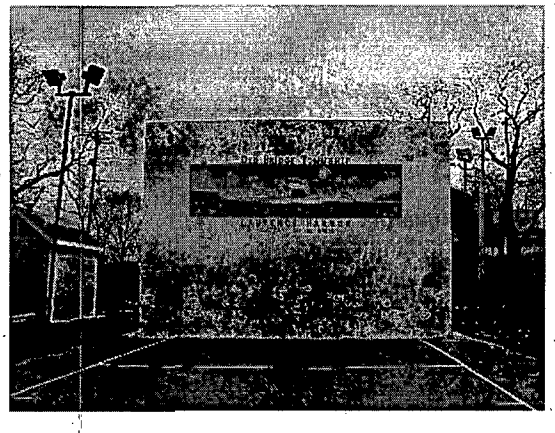
***Twilight Avenue and Shore Avenue***: This access point consists of a set of wooden steps leading down from the residential areas to the wooden walkway of the Old Bridge Waterfront Park. At this point there is also a handicapped ramp leading down from the walkway to



Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper. http://www.nynjbaykeeper.org

the sandy ground. However, the ramp rests about a half foot above the sandy ground, making wheel-chair pushing difficult. There is no public access sign on the roadway marking the entrance to the steps.

***Unnamed Parking Lot***: This access point to the walkway has ten parking spaces.



***Laurence Harbor Beach Area***: The Laurence Harbor access point has portable restrooms, a recreation center and park area, and a parking lot that can hold approximately 100 cars. This access point is adjacent to the Waterfront Park but is owned and operated by Old Bridge Township.

***Clfffwood Way***: This access point consists of a well-worn "informal" pathway to the beach running between two houses. There is a small parking area at the access point, perhaps for 4-6 vehicles, but also a sign stating, "No beach parking, No swimming."




**Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper.** *http://www.nynjbaykeeper.org*

## 3. Waterfront Issues and Planning Initiatives

### 3.1 Waterfront Issues

There are currently no public boat launches in the Township.

Street flooding from tidal and storm events occur in areas in the northem section of the Township. The Township has done work with the State to channel water from flooding the streets and is taking further precautions.

Stormwater runoff is collected through pipes that eventually connect to discharge outfalls mnning under the jetties into Raritan Bay. This stormwater discharge sometimes contains debris and other non-point source pollutants, but the Township did not really consider this pollution.

### 3.2 Planning Initiatives

Phase 2 of the waterfront development project in Old Bridge is referred to as the "Cliffwood Beach" phase. This phase will connect to the existing waterfront walkway and help provide unimpeded access throughout Middlesex County along the waterfront throughout South Amboy, Sayreville, and Old Bridge. Plans for Phase 2 include providing a public launch site for kayaks, canoes and other small boats and additional parking.

Presently, there are five private property owners with backyards abutting this section of the project and negotiations are taking place to allow the township to purchase easements across these five properties for the walkway.

Once the second phase of the waterfront park is completed the narrow width of the waterfront limits any additional development. The bluff above the beach is really the only place available for residential development and even this area is far away enough from the beach itself that the Township does not feel that its development directly impacts the waterfront. There is also the potential for development in the southem section of Old Bridge, perhaps including marine trade stores or restaurants within walking distance to the water.



**Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper.** *http://www.nynjbaykeeper.org*

Old Bridge receives contributions, either financial or in some other way, from Green Acres, Blue Acres, Middlesex County Parks System, Board of Freeholders Open Space Trust Fund, and Old Bridge Township's Open Space Tax Funds in order to advance its open space agenda.

There is no specific waterfront element in the Township's Master Plan. However, the Township does have waterfront zoning:

> C-M Commercial Marine Zone (12 acre minimum lot size): The purpose of this zone is to provide an opportunity for the continued development of marine and resort activities in unique areas that have direct access to navigable waterways. The C-M zone is comprised of almost 182.46 acres.
>
> Note: The Land Use Amendment to the Master Plan recommended that this zone be extended along the northeast side of Route 35, to include lands currently in the CN (Commercial Neighborhood) district. The GM concept would better reflect the types of future development which will draw from the location along Raritan Bay. However, modifications to the bulk regulations of the CM district would be necessitated by the existing lot size pattern along Route 35.
>
> E-R Environmentally Sensitive/Recreation Area: The purpose of this zone is to preserve and protect the ground water table and water recharge areas for water supply purposes, protection of the ecological system and to protect the health and safety of the occupants of lands subject to seasonal and periodic flooding, preserve freshwater wetlands and recognize existing and proposed park lands. Over 5,089 acres have the E-R designation. Much of this area is Cheesequake State Park.

There is also one relevant ordinance applicable to property in or on tidal or coastal waters; tidal of coastal wetlands; freshwater wetlands; and surface waters and floodways (over 50 acres of contributory drainage area). The permitted uses in these areas include marine recreation uses,



**Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper.** *http://www.nynjbaykeeper.org*

such as, marinas, swimming, boating, canoeing and fishing, and recreation uses, such as, parks, picnic groves, golf courses, and hunting clubs.

## 4. Summary

The Township is aware of the premise of the Public Trust Doctrine and its implications. The development of the waterfront park, with the associated access points, parking areas and jetties, has provided improved public access for the residents. Generally, the focus of the Township is to keep it as a pleasant Bayshore community and increase its beachfront character. In terms of development, the only options for the future would be mainly residential.

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**Source: Bonnie J. McCay, Debbie Mans, Satsuki Takahashi, and Sheri Seminski. 2005. "Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River." Keyport, New Jersey: NY NJ Baykeeper.** *http://www.nynjbaykeeper.org*

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| Posted by | Redvip |
| Report location | Raritan Bay > keansburg |
| Fishing method | Surf |

« Previous Report Next Report »

Went to keanburg last night 9 - 12am. Got one short around 21 inches. Lots of nibbles and bumps.You can

definetely tell, there are fish in the water.

Really windy, and then around 11, started raining a lii bit.

Tried my new braid line. Awesome, will never go back.

You cannot beat the casting distance

PS- hey does anybody fish around laurence harbor?

I drove by to check it out. They have those 3 fishing piers next to each other. a couple of guys were there.

I wonder if it gets crowded.



Post Reply Comments and Questions

| Author | Message |
|---|---|
| altoloman<br><br>Joined: 07/22/2006<br>Posts: 1 | 04/14/2008 07:26 AM Report Quote<br><br>I often fish the Laurence Harbor, Old Bridge Waterfront Park area. Especially Spring to Summer. In the summer it gets pretty crowded, but actually a great place to catch bait in the summer. I catch both mullet and peanut bunker there regularly. You can catch anything in this area just as you would in most parts of Raritan Bay. I've caught keeper fluke, bluefish and have seen some bass taken. I don't fish the piers, but instead go to the beach north of the piers.<br><br>Profile Send PM Add Buddy |
| FishingFool<br><br>Joined: 02/01/2005<br>Posts: 59<br>Location: Linden | 04/14/2008 09:03 AM Report Quote<br><br>**Striper Fishing**<br><br>Hi,<br>In couple weeks go to Sandy Hook for stripers inside the park. Used fresh clams slice the clam in half and thread the clam on the #6 hook. Used fishfinder rigs and keep your drag loose in the sand spike. You will do a number on then in May! Anybody wants to fish with the fishingfool on the Fisherman or Sea Hunter partyboat the following Saturday at Atantic Highlands just let me know. I think the fishing will be real good for stripers. Just wondering how much they charged for 3/4 day now that the fuel price went up. :)<br><br>Profile Send PM Add Buddy |

howardrf

Joined: 04/18/2003
Posts: 33

04/14/2008 09:47 AM Report Quote

**Keansburg fishing**

Thanks for the info. It sounds like you fished from the Pier?
What bait were you using?
Reply appreciated.
Howard

Profile Send PM Add Buddy



**Redvip**

Joined: 03/30/2008
Posts: 3

04/14/2008 02:44 PM Report Quote

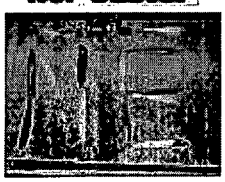
Actually i was not fishing on the pier, but on the keansburg beach.
I actually went back yesterday from 4:30 to 7pm.
Nothing. Totally dead. But to my surprise i got a ticket for parking on those parking spots near the beach. The ticket says "no stub".
I guess you need some type of sticker during the day, does anybody know about that??

Hey altoloman i thought about going to the beach just north of those piers too. Can you park in the little parking lot next to the inlet?

Profile Send PM Add Buddy

**Siick56**

nor'easter



Joined: 01/11/2006
Posts: 2038
Location: New Jersey ><((((º>

04/14/2008 03:30 PM Report Quote

As you can all see, this site has a lot of Long Islanders here. Not many NJ guys, its nice to see there are a few. Maybe we should start a little group here and get together and fish???
Im from Old Bridge. It seems alot of you guys fish the same areas, L Harbor, Cliffwood, Union and Keansburg. We probably crossed paths at some time and didnt even know it!

Anyone looking to do this? NE NJ Fishing Fanatics
We can designate areas and meet up. Pass info along to each other (if you want) and determine what time and place to meet up. I fish alone, and sometimes it really sucks.

Profile Send PM Add Buddy

Post Reply Comments and Questions

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RSS

# Jersey Shore Sea Kayak Association – Launch site directory

## Raritan Bay
## (at Old Bridge Waterfront Park)

Ref# LSNJ030

**)riving Directions:**

- **Garden State Parkway to exit 120.**
- **Make a left onto Matawan Road / Laurence Harbor Parkway.**
- **Take this road (approx. 1.5 miles) to the light at Route 35.**
- **Cross 35 to loop around and take Route 35 North.**
- **Parking lot is on right 1/4 mile north. (Exit from Route 35 just before drawbridge to loop back to parking lot.**

**ddress:**
Route 35
Old Bridge, NJ 08879, Middlesex County
**Land owner:** Township
**GPS Coordinates:** L 40° 27' 42.18" N Lo 74° 15' 16.68" W
**Vater:** Salt
**Vater type:** Bay
**aunch area is:** Beach
**aunch area surface is:** Sand
**acilities:** Rest Rooms, Food, Trash Receptacle
**aunching considerations / restrictions:**
You can unload at edge of lot by the sand.
**'arking situation:**
Parking might get tight on summer weekends (based on how many cars were there on a weekday evening in the summer). Parking area has 132 parking spaces.
**:omments:**
This site is part of the Old Bridge Waterfront Park that has a boardwalk and was recently refurbished. This area has the Hoft Pavilion, which has all the facilities.

This site provides access to the Cheesequake Creek, which is approximately 1/4 mile north along the shoreline.

Caution: The south jetty leading into the Cheesequake Creek inlet is partially submerged at high tide.

If monitoring VHF Channel 13, the Route 35 bridge (over Cheesequake Creek) is referred to as "Morgan Highway Bridge" and the railroad bridge is referred to as "Morgan Railroad Bridge".

If planning to enter Cheesequake Creek, do so 2 hours on either side of high tide or railroad bridge clearance will be too low. In which case you will need to wait for the bridge to open for boat traffic. Railroad bridge opens on demand depending on train schedules which have right of way. Route 35 opens on hour.

If proceeding up Stump Creek, the railroad bridge has enough clearance at high tide. Note: There is no access to Cheesequake Creek from Stump Creek.

**!elated Links:**
Picture of parking area. (pic.jpq 91k)
Picture of putin. (pic.jpg 110k)
Satellite image showing launch site. (Pic.jpg 40k)
Satellite image closeup. (Pic.jpg 42k)
History of the Old Bridge Waterfront
TopoZone Topo map
Mapquest street map

**Jternate Launch site:**

- In Laurence Harbor
  - Garden State Parkway to exit 120.
  - Make a left onto Matawan Road / Laurence Harbor Parkway.
  - Take this road (approx. 1.5 miles) as far as you can and you will run right into the parking lot.
  - **GPS Coordinates:** L 40° 27' 29.1" N Lo 74° 14' 46.0" W
  - Picture bf sign. (pic.jpg 84k)
  - Picture of parking area. (pic.jpg 99k)
  - Picture of putin. (pic.jpg 72k)
  - TopoZone Topo map
  - Mapquest street map
  - Launch area is Sand beach. No Facilities. Asphalt parking area 51 spaces.
  - Launch is from the beach, which is just below the parking lot. At low tide it might be a bit muddy or rocky. There is a sign saying "no boat launching." However Old Bridge police at the park said this means boats on trailers, not cartop boats, and kayaks are okay.

**ast Update:** 7/5/2005

# Raritan Bay

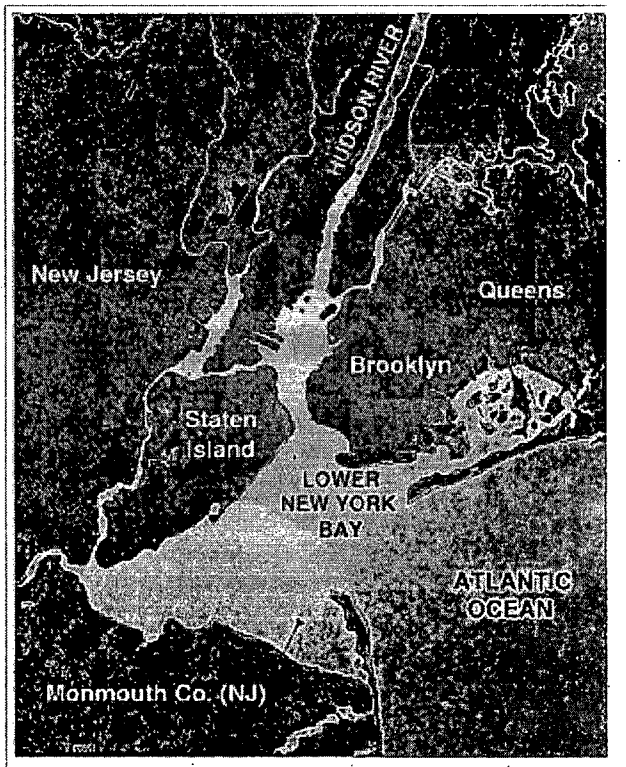
*Interested in contributing to Wikipedia?*



aritan Bay is a bay between the U.S. states of New York and New ersey. It is located at the confluence of the Arthur Kill and the aritan River, which flows into the bay from the west. The bay is ounded on the north by Perth Amboy, New Jersey, and Staten Island 1 New York, on the south by Monmouth County, and on the east by ie Naval Weapons Station Earle pier.

he bay and river are named after the Raritans, a tribe of the Lenape, vho lived in the immediate area around the bay during the 17th entury at the time of the arrival of the Dutch colonists.

hroughout history, the bay has been a prime fishing ground, specially for commercial oyster fishing, until the 20th century. The ay is crossed by a dredged channel allowing commercial ships to nter the Arthur Kill.



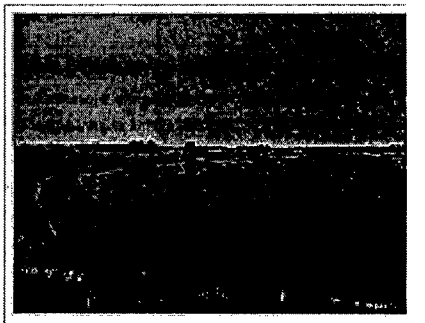

The Port of New York region, with Raritan Bay shown to the left of the words "Lower New York Bay" and above the words "Monmouth Co. (NJ)."

## Contents



## Geologie history of Raritan Bay

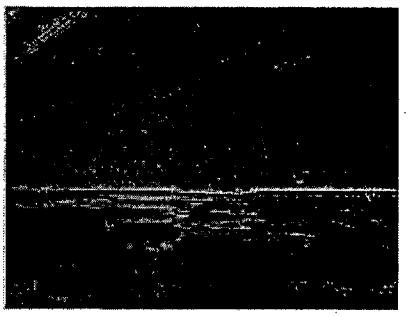
he Arthur Kill is an abandoned river channel carved by an ancestral phase of the ludson River resulting from the blockage of the main channel of the Hudson at The Narrows by moraine or ice. The size of the Arthur Kill channel is large, suggesting iat it was, for a time, the primary drainage from the region. However, it was not a rimary drainage for long because the river did not have enough time to carve a road flood plain. This channel probably developed during Stage 3 (a mid-Wisconsin nterglacial stage). By comparison, the valley of the Raritan River to the south is nuch broader. This is an indication that the Raritan was perhaps the major drainage hannel along the ice front throughout the Wisconsin glaciation (Stages 1, 2, 3 and ). Prior to that time the region drained southward across the saddle between the ıtlantic Highlands and the Newark Basin into the Delaware River Valley. This addle area is a very broad flood plain that preserves river terrace gravels (Pensauken ormation) from the Sangemon Interglacial State (Stage 5), as well as older Pleistocene fluvial deposits (The Bridgetown ormation). During the lowstand in sea level caused by the Wisconsin glacier, the Raritan River carved back into its eadlands and captured the major drainages from the Newark Basin.[1]



the picturesque south side of Raritan Bay

## Marine life

ome of Raritan Bay's fish species include striped bass, fluke, flounder, bluefish, nutog and weakfish. The crustacean species represented include the blue claw crab, iddler crab, green crab and spider crab. Clams and mussels also live in Raritan Bay. lany recreational outdoor enthusiasts fish and crab in the bay. It is a popular estination due to its proximity to the densely populated areas of Central Jersey and lew York City.



The south coast of Raritan Bay

## See also

- Arthur Kill
- Geography of New York Harbor
- Hudson Canyon
- Lower New York Bay
- Bayshore
- Sandy Hook Bay

## References

1. ^ Geologic History of Raritan Bay (http://3dparks.wr.usgs.gov/nyc/morraines/raritanbay.htm) from the U.S. Department of the Interior, [[U.S. Geological Survey], accessed December 13, 2006

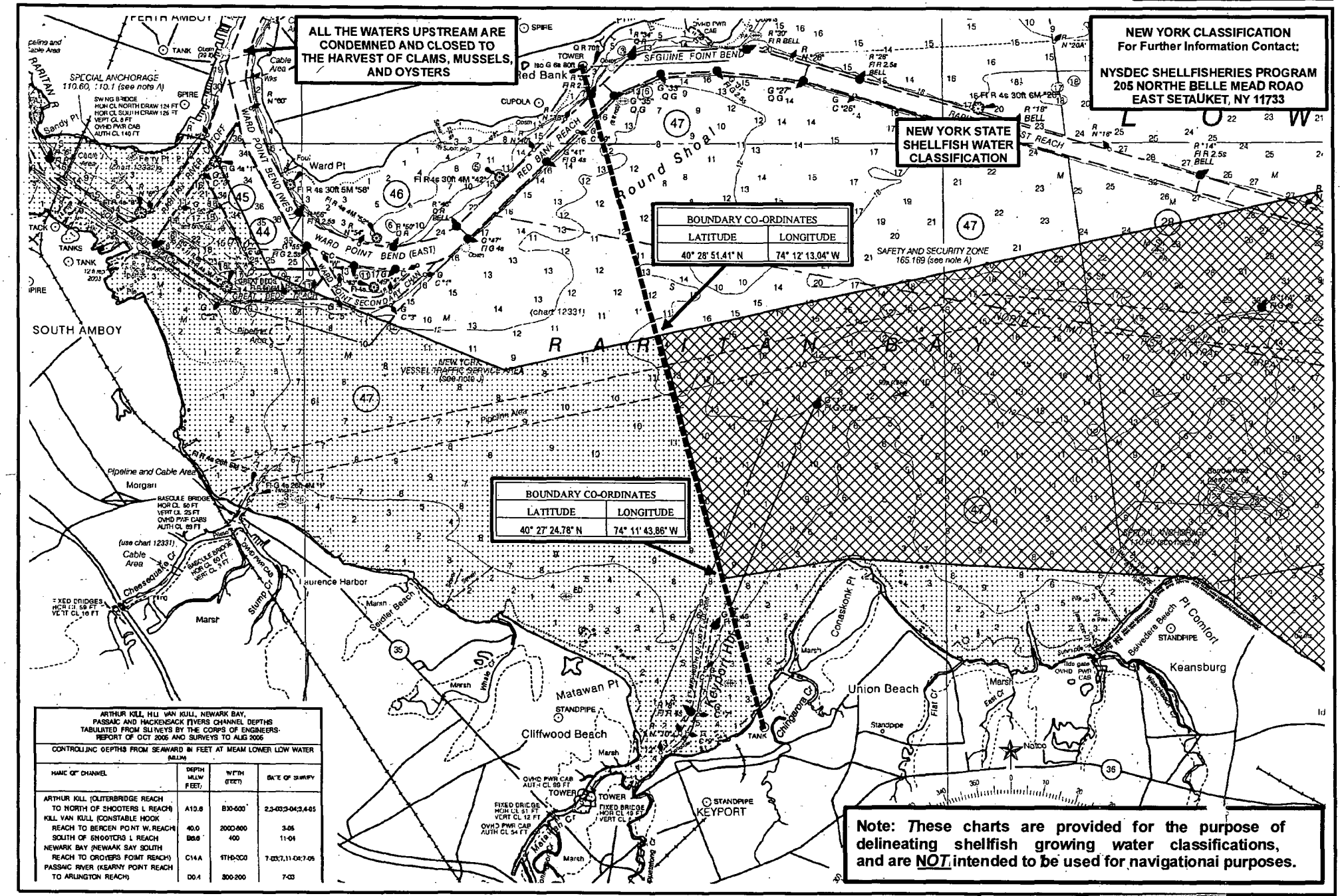
## External links

- Geologic History of Raritan Bay (http://3dparks.wr.usgs.gov/nyc/morraines/raritanbay.htm)

# SHELLFISH GROWING WATER CLASSIFICATION CHART 1A

*NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION*
*WATER MONITORING & STANDARDS*
*BUREAU OF MARINE WATER MONITORING*
*www.nj.gov/dep/bmw*

ADOPTED PURSUANT TO N.J.A.C 7:12.1 ET SEQ
OEP DOCKET NUMBER
DEP 33 - 05 - 09/104
2006




ARTHUR KILL, KILL VAN KULL, NEWARK BAY, PASSAIC AND HACKENSACK RIVERS CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS. REPORT OF OCT 2005 AND SURVEYS TO AUG 2006

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)

| NAME OF CHANNEL | DEPTH MLLW (FEET) | WIDTH (FEET) | DATE OF SURVEY |
|---|---|---|---|
| ARTHUR KILL (OLIVERBRIDGE REACH TO NORTH OF SHOOTERS I REACH) | A10.6 | 800-600 | 2-3-03;3-04;3-4-05 |
| KILL VAN KULL (CONSTABLE HOOK REACH TO BERGEN POINT W. REACH) | 40.0 | 2000-800 | 3-05 |
| SOUTH OF SHOOTERS I REACH | B8.6 | 400 | 11-04 |
| NEWARK BAY (NEWARK BAY SOUTH REACH TO CROWERS POINT REACH) | C14A | 1TH0-300 | 7-03;7,11-04;7-05 |
| PASSAIC RIVER (KEARNY POINT REACH TO ARLINGTON REACH) | D0.4 | 300-200 | 7-03 |

prohibited waters, no depuration steps